Predictors of Success in Applicants to the Radiation Therapy Program at University of Wisconsin-La Crosse

By

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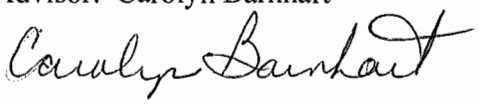

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Abstract

Due to the competitive nature of admissions to the radiation therapy program at University of Wisconsin-La Crosse, as well as an increased interest in radiation therapy programs around the country, the predictors of success evaluated for admissions need to be determined. A survey of radiation therapy educators was conducted to determine predictors of success in admissions to a radiation therapy program. The survey tool consisted of ten questions which included a ranking, open ended, and multiple choice questions. The survey results were analyzed using frequencies and percentages of both the quantitative and qualitative data. Additionally, the themes of the open ended questions were analyzed to generate theories about predictors of success. The research found that radiation therapy educators value of applicants factors such as patient empathy, motivation, and communication skills. However it is difficult to evaluate non-cognitive factors in a manner that is not subjective. An applicant's grade point average is highly weighted during the admissions process due to the fact that it is legally defensible and tangible. A way to assess non-cognitive factors attributes to be determined.

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To my God and Savior, who has truly shown me that: "I can do all things through Christ who strengthens me." (Philipians 4:13). Thank you for sustaining, strengthening, teaching, and loving me through it all.

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Chapter I: Introduction

The radiation therapy program at the University of Wisconsin- La Crosse (UW-L) has successfully graduated a class of radiation therapy students annually 1999. All graduates of the program at UW-L desiring employment have been successfully employed within six months of graduation. In addition, all graduates have passed the national certification examination that is given by the American Registry of Radiologic Technologists (ARRT) on their first attempt. The exam scores on average have placed the program in the 92nd percentile amongst over 90 other radiation therapy programs in the United States. Employers of UW-La Crosse radiation therapy graduates report a very high degree of satisfaction with their respective employees. Many of the graduates of the program have pursued career advancement by pursuing graduate degrees in administration, business, education, and medical dosimetry. The program is effective in accomplishing its goals and mission of producing highly skilled and competent radiation therapists.

The mission of the radiation therapy program at the University of Wisconsin- La Crosse is:

> ...to educate and train radiation therapists who are knowledgeable, technically competent and dedicated to their profession and their patients, meeting the educational and personal needs of its students by emphasizing excellence in education and offering a broad based curriculum in liberal studies, professional courses and clinical internship. This program additionally seeks to promote research and provide a base for further professional development of graduates (UW-La Crosse Radiation Therapy Mission Statement, 2008; 3).

Based upon this mission statement, it is imperative the students admitted to the radiation therapy program will be able to succeed and meet the demands of this

challenging didactic and clinical education program. Therefore, there exists an extensive admissions process in order to select students appropriate for the program.

The radiation therapy program at UW-La Crosse is programmatically accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). As part of this programmatic accreditation, the admissions process must be one that is fair, ethical, and one that assesses several different types of data on each of the qualities of all admission-seeking students (Ochs & Adams, 2008). Such qualities include: cognitive, non-cognitive, qualitative and quantitative data that can be assessed with a Likert scale. Ochs and Adams also report that the admissions process has to be "legally defensible" (p. 85). The legal areas of concern include: affirmative action, i.e. gender and race discrimination, students with disabilities, as well as many more. While these factors are important, it is equally important to identify factors that will predict the success of the student in the program. Currently such factors include: student grade point average (GPA), math and science grades, personality through interviews (Ochs & Adams, 2008).

In the past few years, there has been a large interest and demand by the student body at UW-L for entry into the radiation therapy program. The program is limited to the number of students that can be accepted every year because of the spaces that are available for the clinical internship during the senior year. Currently, the program can accept and train 21 radiation therapy students per cohort. At one time the program will have two cohorts at a time. The average number of applicants in the past five years has been approximately 50 students annually. This makes is difficult to decide which students should be granted acceptance and which should not. Currently the applicant's GPA, clinical observation evaluation, letters of recommendation, and previous health care experience are examined at the time of application. In addition, the student submits an essay regarding their aspiration and motivation to become a radiation therapist. The final step in the application process is a personal interview with a panel of program

officials. The panel includes the program director, clinical coordinators, medical advisor, and a clinical supervisor.

Statement of the Problem

Due to the competitive nature of the application process for the Radiation Therapy Program at the University of Wisconsin- La Crosse, it is important that the selection process is fair and not biased. In addition, it is desirable the students that are selected will succeed both academically and clinically in the program. In recent years there has not been a 100% retention rate as students either withdrew or were dismissed for academic or non-academic reasons. The factors that predict success and completion of the program have not yet been identified.

Salvatori (2001) evidences a need to find predictors of success for health professions programs that do not rely solely on a student's GPA. Instead it should be based on other applicant experiences or traits. Additionally, Salvatori notes that the Medical College Aptitude Test (MCAT) used by medical schools has been a good predictor of medical student success. However, this type of evaluation tool does not exist for other health professional programs. There is very little published information regarding these predictors of success in the field of radiation therapy. This study will aim to identify predictors of success both academically and non-academically for the Radiation Therapy Program at the University of Wisconsin-La Crosse.

The study was completed by surveying program educators at various radiation therapy programs throughout the United States. The survey was sent as a link by email through a list serve of radiation therapy program educators. The survey intended to examine the factors that are used to determine application into the program, the number of applicants per year, interviewing techniques, and student attrition rates. Through an analysis of this data, as well as a literature review, the themes of predictors of success in admissions to a radiation therapy program was determined.

Research Questions

1. What factors during the admissions process predict success for students in the radiation therapy program?
2. How can the attrition rate be minimized in order to retain all students admitted to the program?

Definition of Terms

ARRT: This acronym is for the American Registry of Radiologic Technologists and is the agency responsible for certifying all radiologic science professionals. Radiologic science professionals include: radiation therapists and radiologic technologists (those who take x-rays), nuclear medicine technologists, diagnostic medical sonographers (ultrasound), and medical dosimetrists.

ASRT: This acronym is for the American Society of Radiologic Technologists and is the professional organization for radiologic science professionals in the United States.

Attrition: The withdrawal of the student from the program after beginning the didactic and clinical required coursework.

Cohort: A group of students starting coursework in the program at the same time. Additionally, they take the same courses together and graduate at the same time.

Didactic: The classroom based portion of the program.

Radiologic sciences: This refers to the education of not only radiation therapists, but also radiologic technologists, nuclear medicine technologists, diagnostic medical sonographers (ultrasound), and medical dosimetrists.

Sponsoring institution: The hospital, community college, technical college, college, or university that has a radiation therapy program.

Success in the Program: The completion of the program and achievement of certification in the field of radiation therapy

Assumptions and Limitations

The survey that was conducted with other radiation therapy educators was answered by those that have a fair and credible admissions process. Students who will be examined will meet the required pre-requisites for admissions of the program being surveyed. It was expected that not all radiation therapy program educators will respond to the survey and that those who do supply information, may have given information that is not indicative of predictors of success, such as judging an applicant's physical appearance. It was also assumed that some programs may not want to share admissions information due to its highly defensible legal premise. There is little literature available in the radiation therapy education field regarding the predictors of success in program admissions, therefore literature regarding admissions criteria from other health professions programs as well as institutions of higher education will be reviewed.

Chapter II: Literature Review

Introduction

The radiation therapy program at University of Wisconsin-La Crosse (UW-L) is a prestigious and attractive program for students aspiring to a future career in radiation therapy. With its perfect board exam pass rate and employment rates, the program is quite effective in accomplishing its mission of training and educating future radiation therapists. In addition it is the only bachelor's degree radiation therapy program in the Minnesota, Wisconsin, and Illinois region. Because of the aforementioned statistics, there are many applicants to the program every year. The acceptance of the students into the program is determined by the availability of internship placements at the regional hospitals, serving as clinical internships for the program. At this time, the availability of internship placements will accommodate 21 students per cohort.

In recent years there has been a large increase in applicants to the program. Not all of the applicants to the program are accepted. The students accepted start as a cohort the following fall semester. Once the students begin the program, it is no longer possible to have other students start later if someone were to drop out of the program. In the past few years there have been at least one or two students per year that have been withdrawn from the program due to academic and in one case, non-academic reasons. That brings the graduating class to less than the desired 21 and there are vacancies in the class that cannot be filled by a student who is not in the admitted cohort. Vacancies cannot be filled due to the fact that the cohort has already begun and there is not time for the student to catch up to the others. Because of the high level of competition in admission to the program and the lack of 100% retention has led to the desire to examine what the predictive factors are for student success in the radiation program. In discovering these factors, applicants to the program can be examined according to these factors so that the

students that are admitted to the program are also retained, thus minimizing the attrition rate.

According to Johnson of ASRT, a 2005 survey of radiologic sciences educators demonstrated that there were nearly 32,000 potential radiologic science students who were not admitted to their programs of interest (Johnson, 2006). The demand was demonstrated not only by an increase in interest in these programs by students, but also the lack of available resources by programs to be able to accommodate the larger student interest in radiologic science programs. The results of this survey also showed that over three fourths of radiologic science programs were at capacity at the time of this survey, thus leading to the rejection of the almost 32,000 students. The ASRT also reports the reasons for programs not being able to increase in enrollment is due to staffing issues at the clinical sites, lack of funding by sponsoring institutions, and radiation therapy faculty recruitment. Program directors report difficulty hiring and retaining faculty members to teach and train radiologic science students. The salaries of radiologic science faculty and staff are below average of the typical individual employed in the radiologic technology fields. All of the above mentioned issues attribute to difficulty in recruiting and retaining faculty at community colleges, technical colleges, and universities.

In order to understand the relevance of this study, it is imperative to examine several components that pertain to the predictors of success in admissions of the radiation therapy program at UW-La Crosse. The most often mentioned predictor is the applicant's GPA, not only the applicant's overall GPA, but also the GPA in the pre-requisite classes. In addition the non-cognitive factors of empathy for the patient, communication skills and abilities, and personal motivation are likely to impact the applicant's success in the program. A popular way to assess these non-cognitive abilities is to conduct an interview with the applicant.

Cognitive Predictors

Grade point average. Cognitive predictors are typically referred to as the applicant student's grade point average (GPA) and scores on standardized exams, such as the SAT or ACT (Benbassat, Baumal, 2007 and Noonan, Sedlacek, & Veerasamy, 2005). The GPA is often a strong indicator of an applicant's academic abilities and or potential. At UW-La Crosse (UW-L), an assumption could be made that a student applying to a health professions program who has a high GPA will be successful in that respective program. This is due to the fact the students applying to the program must complete pre-requisite courses in biology, chemistry, anatomy, physiology, and physics. These courses typically are difficult and demanding, and in order to apply to the program, students must have a GPA of at least 2.75 on a 4.0 scale. In addition, it can be assumed a student with a high GPA will succeed in the program, while a student with a lower GPA may not be retained in the program.

For one dental hygiene program, it was evidenced that the overall incoming GPA of a student was a strong predictor for student success, as this GPA was likely to be representative of the student's cognitive abilities (Downey, Collins, & Browning, 2002). Additionally because of the ability to measure quantitatively GPA and entrance exam scores, they rank high in validity and reliability when predicting medical school success (Benbasset & Baumal, 2007). The data support the use of the student's overall incoming GPA to be used as an evaluating tool for program admissions.

GPA in pre-requisite classes. While it is the desire of the program officials for the students to have strong clinical and performance skills while in the radiation therapy program, it is imperative that the students also have the ability to succeed in the didactic or academic portion of the program as well. In addition, Salvatori (2001), states the GPA in pre-requisite courses should be used to evaluate students applying to a health professions program. When the pre-requisite course grades are combined with the overall

GPA, there is an even stronger prediction of academic success in that respective health profession program.

While the overall GPA is likely to be a good predictor of success; a survey conducted by Schneider-Kolsky, Wright, and Baird (2006) examining radiation therapy applicants showed another important predictor. This study showed that grades in certain pre-required classes could also be a strong indication of student success in the program. Schneider-Kolsky, et al. (2006) also studied a group of 100 practicing radiation therapists in Australia. The therapists were polled and asked what they felt were the most important factors to consider in the admission of graduate level radiation therapists. The results show that there was a strong agreement in certain pre-requisite courses. More senior level radiation therapists felt that it was important to examine the student's grades in mathematics and physics. These courses were viewed as a strong representation of the student's aptitude for the field of radiation therapy.

Another study conducted by Green, Johnson, and McCarthy (2003) examining medical school applicants also showed that the overall GPA was important but not as strong of a success predictor as the students' grades in biology, chemistry, math, and physics courses. Their research indicated that the grades in these courses were more important than the overall GPA as far as predicting success. Furthermore, a study examining success predictors in a doctoral pharmacy program as reported by McCall, Allen, and Fike (2006) indicates that again the GPA in advanced biology classes was a strong indicator of student success. Interestingly, the advanced biology class grades were a stronger indicator than the advanced chemistry class grades. At the same time, students who had already obtained an undergraduate degree were likely to be highly successful in the doctoral pharmacy program. Interestingly, chemistry tends to be more problematic for students than biology for students at UW-La Crosse. Much of the student counseling and repeating of classes in preparation for application to the radiation therapy program

pertains to the basic chemistry courses. It is uncertain if this is due to the caliber of the chemistry courses at UW-La Crosse, or challenges in the learning environment.

Similarly, in a report by Seago and Spitz, 2003 as cited by Council (2006), there were three community colleges in California which used grades in pre-requisite courses as a factor of admissions into their radiography program. It was found the schools that required a significant list of pre-requisite courses, in addition to a cumulative GPA of 2.5 had a 95% graduation rate. Such courses required before application were biology, anatomy, and physiology. Courses such as math and chemistry were weighted more heavily in the admissions process (Council, 2006).

Finally the grades reported in not only the sciences, but also humanities courses were noted to be strong predictors of not only program completion, but also performance during the clinical portion of the program. The combined grade evaluation was shown to be a stronger correlation to prediction of success than the science grades alone (Rolfe, et al, 1995 as cited in Salvatori, 2001).

Several authors have also noted the flaws in examining GPAs during admissions procedures for community college health science programs admissions and medical school admissions (Noonan, Sedlacek, & Veerasamy, 2005; Benbasset & Baumal, 2007). There has been evidence in recent years that high school level GPAs have been inflated without increased success in college courses. Additionally, overall college GPAs have slowly increased showing that grade inflation is becoming a problem in both secondary and higher education. Additionally, with the advent of test exam preparatory courses for the SAT and ACT, there appears to be a reduction in the true validity of these exams in predicting a student that will have strong academic success. This is also true for higher education exams for the health professions, such as the Graduate Record Examination (GRE), medical college admission test (MCAT), pharmacy college admission test (PCAT), and the dental admission test (DAT) (Elam et al, 2000). It is difficult to

conclude if a student is truly a high achiever or if they have benefited from inflated grades and preparation for entrance exams. Noonan et al. (2005) report that while GPAs and standardized exams should not be completely eliminated from admissions criteria, it appears that they should not be the sole factors in determining the success of a student in a health science program.

On the contrary, while the GPA appears to be a highly reliable and valid way to measure a student's aptitude towards academic success, the GPA may not necessarily predict strong clinical skills or patient empathy; both of which are essential skills in a strong health care provider (Benbasset & Baumal, 2007). These assets fall into the area of non- cognitive predictors.

Non-Cognitive Predictors

With the uncertainty in the reliability and validity of solely using cognitive factors to predict success in professional health science education, there are other factors that need to be examined. These factors fall in the area of non-cognitive factors and should be combined with the previously mentioned cognitive factors when assessing a potential applicant to a health science education program. Such factors include: motivation, personality variables (Sackett, et al as cited by Noonan et al., 2005; Benbasset & Baumal, 2007), "extracurricular and nonacademic activities" as mentioned by Sedlacek (p. 265), as well as empathy (Benbasset & Baumal, 2007; Wright & Miederhoff, 1999), a desire to practice a particular type of medicine, decision-making, interpersonal communication, ability to learn independently and to work in a team (Benbasset & Baumal, 2007). However, unlike the highly measurable data found in a GPA or exam scores, non-cognitive abilities are not as clear cut to measure. Recall that it is also imperative that admissions criteria be legally defensible (Ochs & Adams, 2008).

Noncognitive questionnaire (NCQ.) Due the difficulty in measuring and assessing the predictive value of the above mentioned non-cognitive factors, a quantifiable

questionnaire was designed by William E. Sedlacek (2003) called the Noncognitive Questionnaire (NCQ) (Table 1 as reported on p. 266). Its main purpose was to create a measurement of intelligences that are not measured on the standardized exams. It can also serve to measure characteristics of students from minority backgrounds and different levels of experience. Finally, Noonan et al. (2005), report: "The NCQ has been shown to have validity in predicting the success (grades and retention) of students in higher education" (p. 465). These characteristics on the NCQ provide a way to measure these non-cognitive factors in a quantitative and predictive way.

Table 1 *Description of Noncognitive Scales as Reported by Sedlacek, 2003.*

Noncognitive scale	Description
Positive self-concept or confidence	Strong self feeling, strength of character, determination, independence.
Realistic self-appraisal	Especially academic. Recognizes and accepts any deficiencies and works hard at self-development. Recognizes needs to broaden his/her individuality.
Understands and deals with racism	Realist based upon personal experience of racism. Is committed to fighting to improve existing system. Not submissive to existing wrongs, not hostile to society, nor a "cop-out". Able to handle racist system. Asserts school role to fight racism.
Prefers long-range goals to short-term or immediate needs	Able to respond to deferred gratification.
Availability of strong support person	To whom to turn in crisis.
Successful leadership experience	In any area pertinent to his/her background.
Community involvement	Has involvement in his/her cultural community.
Knowledge acquired in a field	Unusual and/or culturally related ways of obtaining information and demonstrating knowledge. Field itself may be nontraditional.

Patient empathy. Carl Rogers (1959) described empathy as an ability to "perceive the internal frame of reference of another with accuracy as if one were the other person but without ever losing the 'as if' condition" (p. 210). Similarly, Aring (1958) described empathy as the act or capacity of appreciation of another person's feelings without joining them (as cited by Hojat et al, 2005). The idea of being empathetic is an exceptionally important concept in those applicants that desire to become a radiation therapist. This is an important personality trait and non-cognitive factor that should be considered in addition to GPA. It is important that a radiation therapist is intelligent and knowledgeable in treating their patients, but even more important that they can truly relate to their patients in an empathetic manner. However, like the other non-cognitive traits, it becomes incredibly difficult to measure.

Wright and Miederhoff (1999) report that due to the nature of empathy being closely related to a personality trait, it can be difficult to measure accurately, but should be assessed in health professions program admissions, in particular, pharmacy students. In their research, when first year pharmacy students were assessed using a forced-choice self descriptions of empathy instrument. They were able to conclude that the students that described their personalities and empathy using the forced-choice instrument were seen as having superior verbal communication skills than those who chose the less empathetic word. The forced-choice instrument was seen as more predictive of true empathy skills when compared with self ratings.

Interviews

Interviews as predictors of success. While the GPA remains a strong indicator of the applicant's academic potential and capabilities, the non-cognitive characteristics of a candidate also need to be assessed. Assessment of these characteristics comes in the form of an interview at UW-L. The applicants to the radiation therapy program at the UW-L participate in an interview with a panel of five interviewers. The applicants are asked

questions pertaining to study skills, time and stress management, and motivation to become a radiation therapist. The interview score contributes to twenty percent of the overall score for the applicant. In some situations applicants have not been admitted because of their interview performance, despite their appearance of being a strong student in their application. This was evidenced by their GPA, health care experience, and volunteer activities.

Goho and Blackman (2006) report: "there is widespread but not universal use an interview as part of the admissions selection process for healthcare-related post-secondary education" (p. 335). Currently, 46%-95% of health professions programs in the United States use an applicant interview as part of their selection process (Johnson and Edwards, 1991 as reported by Goho and Blackman, 2006). The interview process is a way to weed out good candidates and determine success in the radiation therapy program. It is assumed that interviewing is an effective tool for selecting the top candidates. However, the research of Goho and Blackman (2006) suggests that "selection interviews very weakly predict academic success" (p. 339). In addition, "there was only a mild positive correlation between performance in the interview setting and performance in the clinical setting" (p. 339).

Another study of admissions interviews, this time medical school interviews, completed by researchers, Stansfield and Kreiter (2007), showed that when raters of an interview used a Likert scale, only the high and low scores were considered to be reliable. The raters tended to disagree about being able to distinguish between mediocre and poor students, therefore giving less reliability and validity to the interview because of the aforementioned discrepancies.

An analysis of medical school interviews as reported by Courneya, et al (2005), showed that a structured panel interview was superior to the individual unstructured interview in its validity and reliability. The panel was composed of three members: a

faculty member, a clinician, and a community member (Courneya, et al, p. 500). Not only were the results more accurate regarding the admission status of applicants, the applicants felt more comfortable with the panel style of interview. Therefore, the applicant was able to express their true personality. One other idea mentioned by their research was that the interviewers of the panel were trained for three hours prior to conducting the interviews. I think that if training were used prior to our panel interviews, we might be more consistent in identifying students whom should be admitted to the program. There was little mentioned in this study about the ability of the interview to predict success of the applicant. Goho and Blackman (2006) reported that there was a small correlation between having a structured interview and clinical success, but no information related to academic success. However it was mentioned the most likely predictor of admission into the medical school was based on the applicant's motivation to practice medicine (Courneya, et al., 2005).

Finally, Husle as cited by Ochs and Adams (2008), states some allied health programs no longer conduct interviews due to the legal actions that can be taken by students who are not granted admission into the respective program (p. 87). Admission to the program at this point is then based solely on the applicant's GPA and other criteria. Husle also identifies five reasons why the interview may not identify predictors academic success:

"a) inappropriate end measures, b) restricted rating range, c) unreliability among interviewer ratings, d) interviewer error, and e) limited interviewer-interviewee interaction" (p. 87).

Student expectation as part of the interview process. Ochs and Adams (2008) discuss the importance of sharing with potential students to radiation therapy programs the expectations of the program (p. 85). This should occur not only at the interview, but also during the recruiting process. If this is not completed, there is likely to

be a difference in expectations of the student and program officials of the true rigor and expectations of the radiation therapy program. While their research found interviews are somewhat necessary to finding out more about the elements of a student's application, as mentioned also by Stansfield and Kreiter (2007), there is little significance to predicting academic success.

Chapter III: Methodology

Due to the competitive nature of the admissions process for the radiation therapy program at University of Wisconsin- La Crosse (UW-L), it has become increasingly important that the selection process be fair and not biased. Additionally it is desired that the students selected will succeed in the program both academically and in their clinical internship placement. The factors that predict success and completion of the program need to be identified.

This study consisted of surveying radiation therapy program educators in the United States in an attempt to identify and examine the predictors of success in the admission of students into radiation therapy programs. The majority of radiation therapy program educators participated on a list serve email discussion. This list serve functioned not only as the survey population, but additionally offered an efficient way to complete the research. In order to specifically find the retention rates, as well as admissions processes and criteria; several open ended questions were asked of the educators. The researcher believed that analyzing the responses, the researcher would be able to generate a theory about the success predictors of students who are admitted into a radiation therapy program. This chapter will discuss research methodology, selection and description of the sample, instrumentation implemented, data collection and data analysis methods, as well as any potential limitations.

Selection and Description of Sample

Fortunately, in the United States, there is a list serve of most of the radiation therapy program educators. Several times per week, individual program educators will post questions regarding student issues, textbooks, and curriculum questions. Within minutes there are often several thoughtful responses to the question asked. This is a great way to collaborate and find out how other programs are handling similar issues or

concepts. In addition, it serves as a great tool to generate ideas and theories to benefit not only educating students, but the profession of radiation therapy.

The researcher asked this group of radiation therapy program educators to complete a survey. A complete and descriptive letter accompanied the survey explaining the purposes of the survey. The researcher believes this is an important issue to many other radiation therapy program educators with the increased interest in radiologic science programs. This was documented by Johnson from the American Society of Radiologic Technologists (ASRT) in his study (Johnson, 2006). There are just over ninety radiation therapy programs in the United States so a survey was sent to everyone on the list serve. It is important for this issue to get as much input back as possible. Since the overall population is small, only 91 individuals, the researcher surveyed all of them.

The radiation therapy program educators in the United States are different because of several factors. One of these factors is age as some of them are close to retirement, some are in the middle of their careers; while others are young and fairly new in their careers. These program directors work in a variety of sponsoring institutions including; community colleges, technical colleges, hospitals, and colleges or universities. Depending upon the type of program that the educator is involved with, there are a variety of students receiving differing degrees, as well as a variety of sponsoring institutions. Some educators are part of a hospital-based certificate program, while others are part of an associate's degree or bachelor's degree program. While the core curriculum and clinical competencies are the same, the longer programs may offer additional education with courses in liberal studies and professional development leading to higher degrees earned. The researcher believes this will offer a very diverse perspective on this issue and will be a very comprehensive view of radiation therapy admissions processes across the country.

Instrumentation

The ten-question survey consisting of one ranking type, six open ended, and three multiple choice questions was used to identify admissions processes and predictors of success. The survey included a cover letter explaining the purposes of and how the results will be used. This survey was created using the survey system, Qualtrics®. Qualtrics® allows the creation of a survey and provides a link to the created survey that can be emailed to others. The survey tool was sent via an email out on the radiation therapy program educators' list serve as a link. The survey remained open for approximately one month. The week prior to the survey closing, a reminder email was sent asking educators to take the survey, and this resulted in additional responses to the survey.

Data Collection

Not only does Qualtrics® create a link and a database for the survey, it also provides a way to analyze the data. When the respondents clicked on the link that was emailed to them, it took them to the survey. Qualtrics® also led them step by step through the survey. Once the survey was complete, the results were retained within the Qualtrics® database. The researcher was able to read and analyze the responses and examine for the commonalities amongst admissions criteria and processes. Additionally the frequencies of admission, graduation, and attrition were calculated.

Data Analysis

The data analysis function of Qualtrics® allowed for the reading of answers to the open-ended questions. Additionally, the analysis of the quantitative-type questions were completed using frequencies and percentages. Using the open-ended questions that were qualitative in nature, the researcher was able to find several common themes amongst them and assign some nominal data to them to find frequencies and percentages of occurrences.

Limitations

This study was completely dependent upon the radiation therapy program educators completing the survey on the radiation therapy program list serve. In addition, by asking several open ended questions, there was a chance the radiation therapy educators would be less likely to answer the questions as it will take longer to answer them versus selecting from choices as in the case of the multiple choice or rating questions. However, this is a common topic of interest among the radiation therapy program educators because of an increase in student interest in radiation therapy programs.

Chapter IV: Results

Due to the competitive nature of admissions in the radiation therapy program at University of Wisconsin-La Crosse (UW-L), it was desired to identify the factors of applicants that can be examined at admission that predict success and completion of the program. An email survey was conducted via Qualtrics® to other radiation therapy program educators in the United States via the radiation therapy programs educators list serve. Upon completion of the survey, the data was analyzed within Qualtrics®. The frequencies of students admitted, students graduated, and students not completing the program were analyzed. In addition, themes of important admissions criteria were identified, important interview purposes, as well as the radiation therapy educators' opinions of predictors of success in applicant students.

At the time of survey, there were 90 radiation therapy educators on the list serve, representing the majority of radiation therapy programs in the United States. Currently there are 92 radiation therapy programs nationally. The number of responses to the emailed survey was 33, resulting in a 32.9% response rate.

Basic Program Statistics

When asked what type of degree is offered by the radiation therapy program, 42% reported that they award a certificate, 18% stated an associate's degree was awarded, and 52% of programs granted a bachelor's degree at graduation. The almost full majority of 32 of the 33 radiation therapy educators report admitting students into their programs once per year. The average number of students admitted per year was statistically 10.8 students. Interestingly, the average number of graduates per year was statistically 9.5 students, resulting in a 1.3% rate of attrition in the reporting programs.

What are some of the reasons for students to withdraw from the radiation therapy program? When asked this question, the responses were varied (Table 2). There were 33 people that responded to this question. Some respondents indicated more than one

answer giving a frequency of 62. The majority of students (64%) were dismissed from the program for academic reasons including cheating, behavior problems, and affective domain issues. Some educators (21.2%) reported students withdrawing for other reasons including family obligations family death, and personal reasons.

Table 2 *Reasons for students to withdraw from radiation therapy programs*

Response	Frequency (N=62)	Percentage
Financial reasons	10	30%
Dismissed by program for behavioral issues	11	33%
Dismissed by program for academic reasons	21	64%
Pregnancy/child birth	6	18%
Decided no longer interested in radiation therapy	7	21%
Other reasons	7	21%

What types of criteria do you consider when examining a potential student for admission into your radiation therapy program? Radiation therapy educators were asked to indicate which factors they used when evaluating an applicant for admission to a radiation therapy program. Additionally they were asked to specify how each factor was weighted in the rating of the applicant. Such factors included GPA of pre-requisite courses, previous health care experience, applicant interview and essay, volunteering activities, professional organization involvement, non-radiation therapy related extracurricular activities, and the job shadowing evaluation. Some educators indicated other factors such as scores on entrance exams, general education courses grades, and references (Table 3). Not only did the radiation therapy educators respond highly to grade point average (GPA), previous health care experience, applicant interview, applicant

essay, job shadowing evaluations, and volunteer activities in terms of frequency, it was observed that GPA, the applicant interview, and the job shadowing evaluations were weighted most heavily. They were weighted 52.6%, 45.2%, and 33.7%, showing where most educators put significant emphasis in the rating of applicants during the admissions process.

Table 3 *Types of Applicant Criteria Examined During the Admissions Process.*

Response	Frequency	Weighting %
GPA of pre-requisite courses	33	52.6%
Previous healthcare experience	26	27.2%
Applicant interview	30	45.2%
Applicant essay	28	25.3%
Job shadowing evaluation	23	33.7%
Volunteering activities	20	22.5%

If you conduct an applicant interview as part of the admissions process, please select the type of interview that you currently use. If you do not use interviews, please select "not used". Of the 33 respondents to the survey, only 3 (9%) respondents reported not conducting an admissions interview at all. Of those that do conduct interviews, 73% report that they have panel interviews with the applicant interviewing a group of program officials. The next majority (12%), who reported they conduct a one-on-one interview with each applicant and that this is typically with the program director. Finally, 6% indicated that they conduct group interviews in which the program officials observe more than one applicant at a time.

What is the purpose of your interview? This was an open ended question in which the radiation therapy educators could describe what they determined to be the main purpose of the interview. The respondents mentioned several factors in each of the open-ended responses, giving a greater amount of responses than just 33. After reading the open-ended responses from the 33 educators, there were about seven general themes that were observed (Table 4) from a total of 66 overall responses to this open-ended question. The qualitative answers were analyzed and the frequencies have been reported (Table 4). The applicants overall knowledge of radiation therapy and various communication skills were given the most responses.

Table 4 *Interview Purposes Themes.*

Response	Frequency (N=66)	Percentage
Applicant's knowledge and interest in radiation therapy	14	21%
Written, verbal, and interpersonal communication skills	14	21%
Attitude, motivation, and maturity	10	15%
Critical thinking problem solving skills	9	14%
Past and present behaviors, organization skills	9	14%
Physical appearance	5	10%
Getting to know the candidate	5	10%

In your opinion, what is the most important factor in predicting success of a potential student in the radiation therapy program? This was also an open-ended question on the survey instrument which obtained 33 responses. However each of the 33

responses had several factors indicated by respondents as to what they believed were important factors for predicting success in radiation therapy program applicants. The total number of comments and responses was 52. When this qualitative data was organized and categorized, there were several strong themes that emerged (Table 5).

Table 5 *Radiation Therapy Educators' Opinions of Important Predictors of Success in Potential Radiation Therapy Program Students.*

Predictive factor	Frequency (N=52)	Percentage
GPA (overall and in pre-requisite courses)	22	42%
Motivation, level of commitment to program and pursuit of becoming a radiation therapist	10	19%
Past healthcare experience and job shadowing experience in radiation therapy	5	9.6%
Interview	4	7.7%
Maturity level, attitude, professionalism	4	7.7%
Understanding of the role of the radiation therapist	4	7.7%
Communication/Interpersonal skills	3	5.8%

The results of this section were quite interesting and when analyzed with respect to cognitive versus non-cognitive factors. The GPA is considered to be the only cognitive ability worth examining at 42%. The remaining factors are considered to be non-cognitive factors at 58%. From this analysis it is clear that radiation therapy educators value strongly the non-cognitive factors when it comes to evaluating potential applicants to their programs. One such respondent commented "GPA predicts academic success, but

not necessarily a good predictor of clinical success" (Survey respondent, personal communication, November 1, 2009).

Chapter V: Discussion

Due to the competitive nature of admissions in the radiation therapy program at University of Wisconsin- La Crosse (UW-L), it was necessary to identify the factors or criteria of applicants that can be examined prior to admission that could be predict success and result in completion of the program. An email survey was conducted via Qualtrics® to other radiation therapy program educators in the United States via the radiation therapy educators list serve. Upon completion of the survey, the data was analyzed within Qualtrics®. The frequencies of students admitted, students graduated, and students not completing the program were analyzed. In addition, the qualitative themes of important admissions criteria were identified, the purpose of the interview was examined, as well as the radiation therapy educators' opinions of predictors of success in applicant students. There was a 36% response to the survey which was opened for one month with one reminder email sent to obtain additional responses before the survey closed. The literature review included information regarding the admission criteria used in other health professions education programs as well as institutions of higher education, due to the lack of information available in the field of radiation therapy.

Limitations

This study was completely dependent upon the program educators completing the survey on the radiation therapy program list serve. In addition, by asking several open ended questions, there was a chance that the educators would be less likely to answer the questions as it would have taken longer to answer versus selecting from choices as in the case of the multiple choice or rating questions. However, this is a common topic of interest amongst radiation therapy program educators due to the fact there is an increased student interest in radiation therapy programs. In speaking with other radiation therapy program educators at conferences and seminars, it is evident the predictors of success in potential radiation therapy students, is a common area for questions by many of them.

The response rate to the survey was fairly low at 36%. Additionally, themes were generalized regarding the predictive criteria because the questions were open-ended and qualitative in nature. The frequencies of this qualitative data, as well as the quantitative data represented the level of statistical analysis employed in this research.

Conclusions

The majority of radiation therapy program educators who responded to the survey are part of either a certificate or Bachelor's Degree program. The average number of students admitted to the 33 programs surveyed was 10.8, with the average number of students graduating from these programs at 9.5. The attrition rate of the surveyed programs was very low at 1.3%. The most common reason for attrition amongst the programs was largely due to academic reasons such as failure of a class or during the clinical internship.

When examining the qualitative, open-ended questions, the most frequent type of criteria that radiation therapy program educators report examining and weighting highest in applicants during the admission process was the grade point average (GPA). This is likely due to the fact that it is easily quantifiable and legally defensible which is extremely important when conducting admissions (Ochs & Adams, 2008). A high GPA is important because of the rigorous content that is taught and applied in radiation therapy programs. However, it does not conclude that students with higher GPAs will be successful clinically, this is a large portion of the program and important aspect of practice as a radiation therapist (Benbasset & Baumal, 2007).

The majority of programs surveyed (91%) report that they conduct interviews during the admissions process. The most common type (73%) of interviewing structure was the applicant plus a panel of program officials. This is consistent with the literature as reported by (Corneya et al., 2005) of what improves student comfort with the interview process. When radiation therapy educators were asked what they prefer to examine in an

interview, only a small percentage (14%) indicated that they looked at interest in and knowledge of radiation therapy which is more of a cognitive aspect. The other remaining criteria of importance pertained to non-cognitive factors such as motivation, maturity, communication skills, critical thinking skills, as well as past behaviors. Since interviews are common practice amongst the surveyed radiation therapy educators, these non-cognitive factors can be examined. However they still remain difficult to quantify and are even more difficult to legally defend. There is likely to still be many interview errors that occur as mentioned by Husle as cited by (Ochs and Adams, 2008). This necessitates the need to be able to quantify this non-cognitive information (Noonan et al. 2005; Wright & Miederhoff, 1999).

When radiation therapy educators were asked what they thought the overall predictors of success were in an applicant to a radiation therapy program, 42% reported that the overall grade point average (GPA) and GPA in pre-requisite courses were the most important items. On the contrary, the remaining criteria mentioned were non-cognitive factors and pertained to 58% of the responses. It seems that while educators value the predictability of the GPA for success in a radiation therapy program, there are also several non-cognitive factors that are just as important, but difficult to quantify.

Recommendations

Due to the suggestive nature of the importance of the value of non-cognitive criteria when admitting students to a radiation therapy program, a way to quantify this information should be constructed. Perhaps employing formats similar to Sedlacek's NCQ (Noonan, et al., 2005) or the mentioned patient empathy forced-choice questionnaire (Wright & Miederhoff, 1999) should be implemented during radiation therapy program admissions proceedings. Further research should be completed with implementation of an instrument to quantify the highly valued non-cognitive criteria at admission to ensure fairness and criteria that is legally defensible.

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Appendix A: Human Subject Approval Form

University of Wisconsin Stout
Protection of Human Subjects in Research Form

Data collection/analysis cannot begin until there has been IRB approval of this project.

Directions:

- **Individuals who have completed the UW-Stout Human Subjects Training and can prove certification are eligible to file this form.**
- **This form must be filed and approved prior to any student (undergraduate or graduate), faculty, or staff conducting research.**
- **Complete this form on-line and print. Handwritten forms will not be accepted. *For your benefit, save your completed form in case it needs to be revised and resubmitted.***
- **Send or take the completed form, with required signatures and required materials attached, to Research Services, 152 Voc. Rehab. Building.**
- **This is a professional document; please check spelling, grammar and punctuation.**

Research is defined as a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

A human subject is defined as a living individual about whom an investigator obtains either 1) data through intervention or interaction with the individual; or 2) identifiable private information.

Investigator(s):
Name: Melissa R. Weege ID: 047682 Daytime Phone # 608-769-5102 Program: MS Education Graduate Student: ☒ Undergraduate: ☐
e-mail address: weegeme@uwstout.edu Signature: _____

Name: ID: Daytime Phone # Program: Graduate Student: ☐ Undergraduate: ☐
e-mail address: Signature: _____

Name: ID: Daytime Phone # Program: Graduate Student: ☐ Undergraduate: ☐
e-mail address: Signature: _____

For students:
Research Advisor's Name: Carolyn Barnhart Department: UW Stout- Food & Nutrition Sciences
Signature: _____ Date of Approval: _____
Research Advisor: Have you completed UW-Stout's Human Subjects Training? Yes ☐ No ☐.
Reminder: You must have completed the new training after January 2, 2007.

Project Title: Master's Degree Thesis-

Sponsor (Funding agency, if applicable):
Is this project being supported by Federal funding? Yes ☐ No ☒

You must answer all of the following questions completely and attach all required forms.

1. Describe the proposed research/activity stating the objectives, significance, and detailed methodology (approximately 250-500 words; descriptions are to be written in future tense).

Objectives:

Research Questions

1. What factors during the admissions process predict success in students in the radiation therapy programs?
2. How can the attrition rate be minimized in order to retain all students admitted to the radiation therapy program?

Significance:

Statement of the Problem

Due to the competitive nature of the application process for the radiation therapy program at the University of Wisconsin-La Crosse, it has become increasingly important that the selection process is not only fair, but also unbiased. It is desired that the students selected will succeedin the program both academically and clinically. In the past few years there has not been a 100% retention rate in the program as students either withdrew or were dismissed for academic or non-academic reasons. The factors that predict success and completion of the program need to be identified.

Salvatori (2001) evidences the large need to find success predictors for health professions programs that do not rely solely on a student's GPA, instead it should be based other applicant experiences or traits. Salvatori notes that the Medical College Aptitude Test (MCAT) used by medical schools has been a good predictor of medical student success. However, this type of evaluation tool does not exist for other health professional programs. There is very little published information regarding these success predictors in the field of radiation therapy. This study will aim to identify predictors of success both academically and non-academically for the Radiation Therapy Program at the University of Wisconsin-La Crosse.

Detailed Methodology:

This study will survey radiation therapy program educators in the United States in an attempt to identify and examine the predictors of success in the admission of students into radiation therapy programs. The majority of radiation therapy program educators participate on a list serve email discussion. This list serve will serve not only as survey population, but offer a fairly inexpensive way to complete the research. In order to specifically find out about retention rates and admissions processes and criteria; several open ended questions will be asked of the program educators I believe that by analyzing their responses, I will be able to generate a theory about the success predictors of students that are admitted into a radiation therapy program.

Selection and Description of Sample

Fortunately, in the United States, there is a list serve of most of the radiation therapy program educators. Several times per week, individual program educators will post questions regarding student issues, textbooks, and curriculum questions. Within minutes there are often several thoughtful responses to the question asked. This is a great way to collaborate and find out how other programs are handling similar issues or concepts. In addition, it serves as a great tool to generate ideas and theories to benefit not only educating students, but the profession of radiation therapy as a whole.

I will ask this group of program educators to complete my survey. A complete and descriptive letter will accompany the survey explaining its purposes. I believe that this is an important issue to many other program educators with the positive rise of interest in radiologic science programs (Johnson, 2006). There are just over ninety programs in the United States so I will send this survey to everyone on the list serve and will not do any sampling. It is important for this issue to get as much input back as possible. Since the overall population is rather small, I will survey all of them.

2. **Is this research?**
   (a) Is your activity intended for public dissemination? Yes ☒ No ☐
   (b) Can it reasonably be generalized beyond the research sample? Yes ☐ No ☒

If you answered "no" to both a and b, do not continue with this form. Stop here and submit form.

3. Does your research involve human subjects or official records about human subjects? Yes ☒ No ☐

If yes, continue with this form. If no, stop here and submit form.

4. Are you requesting exemption from IRB review in one of the federally approved categories? **If no, skip to Question #5 regarding Human Subjects Training.** If yes, please select the category below that applies and continue with the form. The IRB will assess qualifications for exemption status based on your responses. If you have questions, more information about the exemption categories can be found on the OHRP website: http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm#46.101.

The following categories of research are exempt from this policy:

☐ (1) Research conducted in ***established or commonly accepted educational settings, involving normal educational practices***, such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

☐ (2/3) Research involving the ***use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior***, unless:
(i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; ***AND*** (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

☐ (4) Research involving the collection or study of ***existing*** data, documents, records, or pathological or diagnostic specimens, ***if these sources are publicly available OR*** if the information is recorded by the investigator in such a manner that ***subjects cannot be identified***, directly or through identifiers linked to the subjects.

☐ (5) Research and demonstration ***projects which are conducted by or subject to the approval of department or agency heads***, and which are designed to study, evaluate, or otherwise examine:
(i) ***Public benefit or service programs***; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

☐ (6) Research involving ***taste and food quality evaluation*** or consumer acceptance studies.

5. Human subjects training must be completed prior to filing this form. Have you completed UW-Stout's Human Subjects Training (http://www2.uwstout.edu/rs/hstraining/index.htm)? Yes ☒ No ☐

6. Please note that research cannot begin until this project has been approved by the IRB. When is the data collection for the research *intended* to begin and end? **10/09** to **12/09** (enter month/year)

7. Can the subjects be identified directly or through any type of identifiers? Yes ☐ No ☒ If yes, please explain.

8. Special precautions must be included in your research procedures if any of these special populations or research areas are included.

Are any of the subjects:

(a) minors (under 18 years of age)? Yes ☐ No ☒
(consent from parent & subject required)
(b) legally incompetent? Yes ☐ No ☒
(c) prisoners? Yes ☐ No ☒
(d) pregnant women, if affected by the research? Yes ☐ No ☒
(e) institutionalized? Yes ☐ No ☒
(f) mentally incapacitated? Yes ☐ No ☒

Does the research deal with questions concerning:

(a) sexual behaviors? Yes ☐ No ☒
(b) drug use? Yes ☐ No ☒
(c) illegal conduct? Yes ☐ No ☒
(d) use of alcohol? Yes ☐ No ☒

9. Voluntary participation/consent form:
Expected Number of Participants **60**

Describe the method:
(a) for selecting subjects.
The subjects are radiation therapy program educators in the United States who are part of an email list serve. The link to the survey will be mailed to all of them.

(b) for assuring that their participation is voluntary. If subjects are children and they are capable of assent, they must give their permission, along with that of their parent, guardian, or authorized representative. NOTE: A school district cannot give permission or consent on behalf of minor children.
The subjects (the radiation therapy program educators will have the option to choose whether or not to participate in the survey. If they choose to participate they will click on the link and take the survey. If they choose not to participate, they will simply choose not to take the survey.

10. Procedures: Describe how subjects will be involved in detail.
The subjects will answer the questions on the survey that relate to the admissions practices of their respecitve radiation therapy programs. While they will provide the details of admissions processes and admission statistics, they will not provide any information that identifies specific students.

If the study:
(a) involves false or misleading information to subjects or
(b) withholds information such that their informed consent might be questioned, or
(c) uses procedures designed to modify the thinking, attitudes, feelings, or other aspects of the behavior of the subjects, describe the rationale for that, how the subjects will be protected and what debriefing procedures you will use.

I will include a cover letter that will describe the rationale of the study, as well as how the information will be used. Please see attached cover letter.

11. Special precautions must be included in your research procedures if you are doing an online survey.
Are you doing an online survey? Yes ☒ No ☐
If yes, please answer the following questions. If no, please skip to the next question.

(a) Will your survey results be posted on a website that could be accessed by individuals other than the investigators?
Yes ☐ No ☒

(b) Does the URL for the survey include information that could identify individuals, such as a student ID?
Yes ☐ No ☒

(c) When you send out an email inviting subjects to complete the survey:
Will you place all of the email addresses in the "bcc" line? Yes ☒ No ☐
Will you have the "read receipt" function turned off? Yes ☒ No ☐

(d) If your survey contains questions where the subjects choose from a drop-down menu, do they have the option to choose "no response" or to leave the question blank?
Yes ☒ No ☐ No drop-down questions ☐

If, in question #11, you answered "yes" to question (a) or (b), or if you answered "no" to question (c) or (d), please address your reason(s) when completing question #12.

12. Confidentiality: Describe the methods to be used to ensure the confidentiality of data obtained.
The surveys are anonymous as I do not ask for any program directors names. Therefore, I will not know which programs indicate certain information. This will help ensure the confidentiality of the responses.

13. Risks: Describe the risks to the subjects and the precautions that will be taken to minimize them. (Risk includes any potential or actual physical risk of discomfort, harassment, invasion of privacy, risk of physical activity, risk to dignity and self-respect, and psychological, emotional, or behavioral risk.) Also, address any procedures that might be different from what is commonly established practice for research of this type.
There is no known risk involved.

14. Benefits: Describe the benefits to subjects and/or society. (These will be balanced against risk.)
There is very little information available in the field of radiation therapy regarding the criteria or factors that are examined when admitting students to a radiation therapy program. This information will be published in a professional journal so that the proram directors wil then be able to see how applicants are being examined.

15. Attachments to this form: (NO ACTION WILL BE TAKEN WITHOUT THESE FORMS)

(a) Consent form(s). Form(s) should include explanation of procedures, risk, safeguards, freedom to withdraw, confidentiality, offer to answer inquiries, third party referral for concerns, and signature (only if the subjects can be identified by any means). If the survey is strictly anonymous, then a signature is not required). Sample consent forms can be found at http://www.uwstout.edu/rs/documents/cform.doc

(b) Questionnaire/Survey Instrument. The final version of the Questionnaire/Survey instrument must be attached. Also, if the survey is being conducted verbally, a copy of the introductory comments and survey questions being asked must be attached to this form. If your survey includes focus group questions, a complete list of the questions should be attached. For research using a published/purchased instrument, a photocopy of the complete survey will suffice.

(c) Printed copy of the UW-Stout Human Subjects Training Certification.

The project or activity described above must adhere to the University's policies and institutional assurance with the U.S. Department of Health and Human Services regarding the use of human subjects. University review and approval is required. **REMINDER: You are in violation of UW-Stout, UW System, and federal government policies if you begin your study before IRB approval is obtained.**

Projects that are not completed within one year of the IRB approval date must be submitted again. Annual review and approval by the IRB is required. Projects that are determined to be exempt from IRB review hold exempt status for a period of 5 years, unless there are significant changes to the project.

Institutional Review Board Action:

_____ Project is exempt from IRB review under category ____. Exemption holds for 5 years.

_____ Project approved through expedited review.

_____ Project approved through expedited review provided minor modifications are completed.

_____ Project approved through the full board review process; date of meeting: _____

_____ Additional information is requested. Please see attached instructions and resubmit.

_____ Project not approved at this time.

_____ Project does not include human subjects.

_____ Project is not defined as research.

Signature: _____

Institutional Review Board Chair or Designee Date

Appendix B: Survey Tool

Radiation Therapy Admissions- Predictors of Success

Program Statistics

What type of degree is awarded upon graduation from your radiation therapy program? Check all that apply.

- [ ] Certificate
- [ ] Associates Degree
- [ ] Bachelor's Degree
- [ ] Master's Degree

How many times per year are students admitted into your radiation therapy program?

How many students are admitted each year into your radiation therapy program?

On average, how many students graduate from your radiation therapy program each year?

On average, how many students are withdrawn from the program each year?

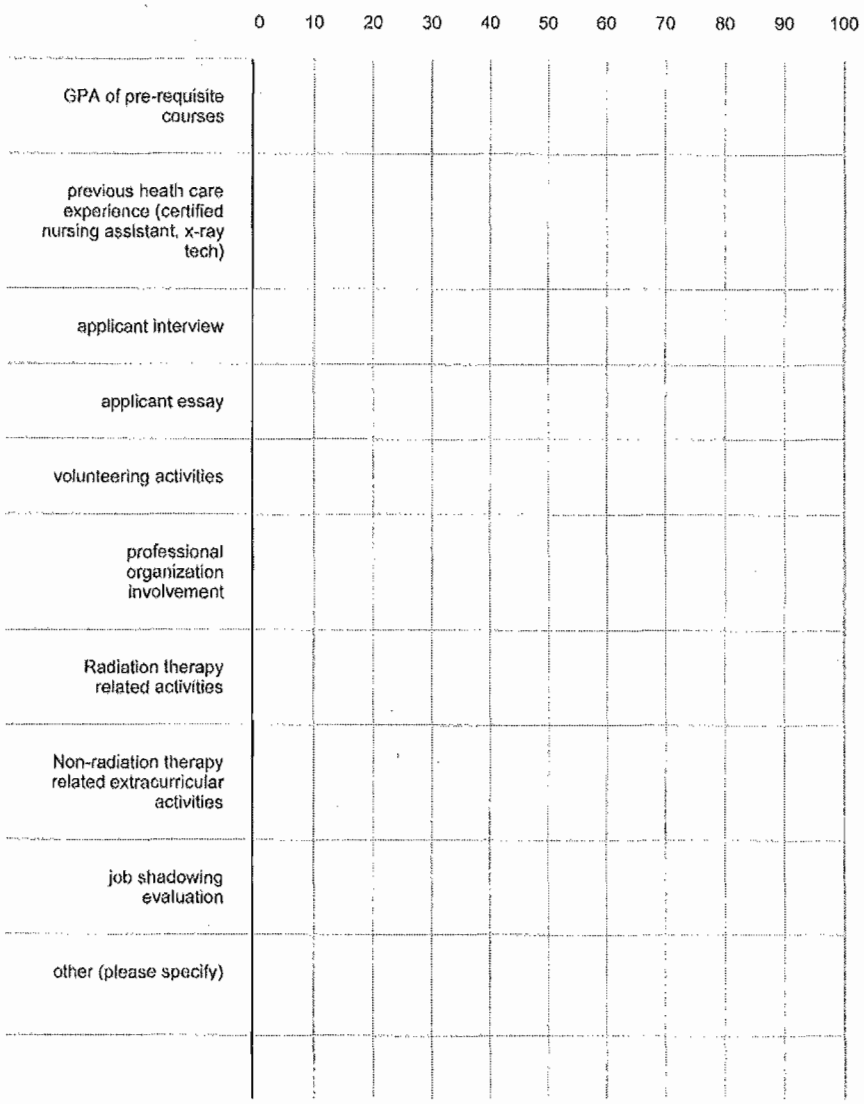
What are some of the reasons for students to withdraw from the radiation therapy program? Check all that apply.

- [ ] financial reasons
- [ ] dismissed by program for behavioral issues (if possible please specify issue, ie. cheating, attendance)
- [ ] dismissed by program for academic reasons (failing grades)
- [ ] pregnancy- child birth
- [ ] decided no longer interested in radiation therapy
- [ ] other- please specify

Admissions Process Information

What types of criteria do you consider when examining a potential student for admission into your radiation therapy program? Additionally, how are these criteria weighted into the final score of the applicant? (Please check all criteria that apply to your admissions process and how heavily they are weighted. If necessary, please write in additional criteria and their weightings.)

Amount that the criteria is weighted in the final scoring of the applicant



other, please specify											
other, please specify											

If you conduct an applicant interview as part of the admissions process, please select the type of interview that you currently use. If you do not use interviews, please select "not used".

- ◯ a panel interview (group of program officials + applicant)
- ◯ One-on-one interview (program official + appliant)
- ◯ Group interview (program officials observing more than one applicant at a time)
- ◯ other (please specify)
- ◯ not used

What is the purpose of your interview?

In your opinion, what is the most important factor in predicting the success of a potential student in the radiation therapy program?